

§Appl. No. 10/017,393  
Amdt. dated May 6, 2004  
Reply to Office Action of, February 23, 2004

## REMARKS

### Rejections under §112, first and second paragraphs

The skilled worker would understand that the term “complement” in the claims referred to polynucleotides which possess 100% complementarity to the recited sequence. See, also, Specification, Page 11, line 9. Nonetheless, the claims have been amended by replacing the term “complement” with “complete complement.” This amendment does not change the scope of the claims since the skilled worker would have reasonably construed the original term (“complement”) in the claims to have the same scope as the substituted phrase (“complete complement”).

A search of the PTO patent database revealed 2340 DNA patents which used the term “complement thereto” in the claims, and only 32 patents which recited the examiner’s preference “complete complement thereto.” See, Exhibit 1. Many of these patents refer to a sequence identification number (“SEQ ID NO”), and then to the **complement** of it. It is not logical that the claimed complement would be broader than the sequence associated with its identifier, and therefore, it is evident that the term “complement” as utilized in over 98% of the patents in Exhibit 1 is understood to mean “complete complement,” making the amendment unnecessary.

Applicant has amended Claim 2 to recite specific hybridization conditions. Support for this amendment can be found in the specification, e.g., Page 8, lines 22-27. This claim type has been determined by the Patent Office to meet the requirements of §112, first paragraph. See, Example 9 of the Written Description Guidelines. For example, it is stated on Page 36 of the Guidelines: “Now turning to the genus analysis, a person of skill in the art would not expect substantial variations among species encompassed with the scope of the claims because the highly stringent hybridization conditions set forth in the claim yield structurally similar DNAs.

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Thus, a representative number of species is disclosed, since highly stringent hybridization conditions in combination with coding function of DNA and the level of skill and knowledge in the art are adequate to determine that applicant was in possession of the claimed invention.”

Claim 2 has also been amended to expressly recite “wherein said polynucleotide codes for a polypeptide that has H2 receptor activity.” Support for this amendment can be found throughout the specification, e.g., on Page 1, line 29-Page 2, line 8; Page 3, lines 10-23.

The phrase “specific fragments” would be understood by the skilled worker, especially when read in light of the specification. The claim has been amended to clarify it. Support for this amendment is found in the specification, e.g., on Page 11, line 22-Page 12, line 14; and Page 17, lines 1-30. This amendment does not change the scope of the claim in any way, but merely conforms the claim to the description of “specific fragments” as already defined in the specification.

### **Rejection under §102**

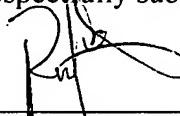
The sequence identified in U.S. Pat. No. 5,994,506 is a human histamine H2 receptor having 359 amino acids. See, the ‘506 Patent, Fig. 2A3 and SEQ ID NO:13. As discussed fully in the specification: “It has now been found that the H2R receptors as previously identified were incomplete, lacking a substantial portion of the C-terminus that projects into the cell cytoplasm. Despite years of intensive research on this medically important receptor, this deficiency went unnoticed. Strikingly, the human form of this novel H2 receptor codes for a 422 amino acid polypeptide, 63 more amino acids than present in the previously known form.” The polynucleotide of this previously known form does not have 95% or more sequence identity **along the entire length** of the polynucleotide sequence set forth in SEQ ID NO:1. Sequence Comparison A attached to the Office action indicated it was only 84.6% matching. Moreover, there is no disclosure cited in the Office action of the polynucleotides of claims 3, 4, or 5. Consequently, the rejection should be withdrawn.

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In view of the above remarks, favorable reconsideration is courteously requested. If there are any remaining issues which could be expedited by a telephone conference, the Examiner is courteously invited to telephone counsel at the number indicated below.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

  
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Attorney Docket No.: ORIGEN-0017

Date: May 6, 2004

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NO.            Title

- 1 [6,720,477](#) T Signal transduction stress-related proteins and methods of use in plants
- 2 [6,720,476](#) T CTR1 homologue from melon
- 3 [6,720,181](#) T Ubiquitin ligases as therapeutic targets
- 4 [6,720,172](#) T Genes encoding sulfate assimilation proteins
- 5 [6,720,166](#) T Non-a, non-b, non-c, non-d, non-e hepatitis reagents and methods for their use
- 6 [6,720,146](#) T Compositions and methods for the therapy and diagnosis of ovarian cancer
- 7 [6,716,625](#) T Histidine kinases of Aspergillus and other fungal species, related compositions, and methods of use
- 8 [6,716,616](#) T Human kinase proteins and polynucleotides encoding the same
- 9 [6,716,607](#) T Chicken interferon gene and novel recombinant DNA
- 10 [6,716,604](#) T Nucleic acid molecules encoding a subunit of a human calcium/calmodulin-dependent protein kinase
- 11 [6,716,576](#) T Method of assaying Neutrokinin-alpha mRNA level
- 12 [6,716,575](#) T Diagnosis and treatment of AUR1 and/or AUR2 related disorders
- 13 [6,716,432](#) T Pneumolysin mutants and pneumococcal vaccines made therefrom
- 14 [RE38,490](#) T Method for identifying metastatic sequences
- 15 [6,713,666](#) T Invertase inhibitors and methods of use
- 16 [6,713,606](#) T Conjugates of soluble peptidic compounds with membrane-binding agents
- 17 [6,713,259](#) T Corn event MON810 and compositions and methods for detection thereof
- 18 [6,713,066](#) T Production of attenuated respiratory syncytial virus vaccines involving modification of M2 ORF2

- 19 6,710,229 T Cell cycle stress-related proteins and methods of use in plants  
20 6,710,170 T Compositions and methods for the therapy and diagnosis of ovarian cancer  
21 6,710,027 T Bacillus thuringiensis toxins and genes for controlling coleopteran pests  
22 6,709,863 T Nucleic acid molecules encoding multiple start codons and histidine tags  
23 6,709,842 T DNA encoding a growth factor specific for epithelial cells  
24 6,709,838 T Nucleic acid encoding patched-2  
25 6,709,829 T Methods and compositions for detection of disease  
26 6,709,816 T Identification of alleles  
27 6,709,812 T Method for typing and detecting HBV  
28 6,706,948 T Sugarcane UBI9 gene promoter and methods of use thereof  
29 6,706,509 T Oncoprotein protein kinase  
30 6,706,491 T Reagents and methods for identifying and modulating expression of genes regulated by p21  
31 6,706,485 T Method of identifying agents that inhibit APP processing activity  
32 6,706,472 T Group of nucleic acid molecules salmonella detection, nucleic acids, kit and use  
33 6,706,262 T Compounds and methods for therapy and diagnosis of lung cancer  
34 6,703,495 T Polynucleotides encoding human transporter protein  
35 6,703,491 T Drosophila sequences  
36 6,703,489 T Antibodies to vertebrate serrate proteins and fragments  
37 6,703,229 T Aryl propenal double bond reductase  
38 6,703,221 T Notch receptor ligands and uses thereof  
39 6,703,220 T Human neurogenin 3-encoding nucleotide sequences  
40 6,699,980 T Nucleic acid molecule encoding a mismatch endonuclease and methods of use thereof  
41 6,699,704 T Heat tolerant phytases  
42 6,699,703 T Nucleic acid and amino acid sequences relating to Streptococcus pneumoniae for diagnostics and therapeutics  
43 6,699,664 T Compositions and methods for the therapy and diagnosis of ovarian cancer  
44 6,699,663 T Molecular sequence of swine retrovirus  
45 6,699,476 T Production of recombinant respiratory syncytial viruses expressing immune modulatory molecules  
46 6,696,619 T Plant aminoacyl-tRNA synthetases  
47 6,696,561 T Corynebacterium glutamicum genes encoding proteins involved in membrane synthesis and membrane transport  
48 6,696,293 T Process for producing carotenoids and biological materials useful therefor  
49 6,696,292 T Genes encoding sulfate assimilation proteins  
50 6,696,256 T Method, array and kit for detecting activated transcription factors by hybridization array

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PAT. NO.      Title

- 1 [6,720,146](#) Compositions and methods for the therapy and diagnosis of ovarian cancer
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- 3 [6,686,188](#) Polynucleotide encoding a human myosin-like polypeptide expressed predominantly in heart and muscle
- 4 [6,686,185](#) 25934, a novel fatty acid desaturase and uses therefor
- 5 [6,682,888](#) Genes expressed in alzheimer's disease
- 6 [6,680,191](#) Isolated nucleic acid molecules coding for tumor rejection antigen precursors of members of the MAGE-C and MAGE-B FAMILIES and uses thereof
- 7 [6,656,700](#) Isoforms of human pregnancy-associated protein-E
- 8 [6,632,934](#) MORC gene compositions and methods of use
- 9 [6,623,937](#) Programmed cell death antagonist protein
- 10 [6,620,922](#) Compositions and methods for the therapy and diagnosis of prostate cancer
- 11 [6,590,089](#) RVP-1 variant differentially expressed in Crohn's disease
- 12 [6,569,657](#) 32140, a novel human aldehyde dehydrogenase and uses therefor
- 13 [6,541,236](#) Protein having glutaminase activity and gene encoding the same
- 14 [6,531,280](#) Method for identifying or isolating a molecule and molecules identified thereby
- 15 [6,518,411](#) RGS compositions and therapeutic and diagnostic uses therefor
- 16 [6,509,155](#) Nucleic acids encoding GTPase activating proteins
- 17 [6,503,700](#) Mammalian CDP-diacylglycerol synthase
- 18 [6,500,942](#) Rin2, a novel inhibitor of Ras-mediated signaling
- 19 [6,500,642](#) Molecule associated with apoptosis
- 20 [6,479,263](#) Method for detection of micrometastatic prostate cancer
- 21 [6,476,212](#) Polynucleotides and polypeptides derived from corn ear

- 22 6,455,292 **T** Full-length serine protein kinase in brain and pancreas  
23 6,448,041 **T** Colon cancer marker  
24 6,444,456 **T** Human G-coupled protein receptor kinases and polynucleotides encoding the same  
25 6,436,687 **T** cDNA sequence of mouse brain sialidase gene  
26 6,355,430 **T** Diagnostic and screening methods employing KIAA0101  
27 6,355,245 **T** C5-specific antibodies for the treatment of inflammatory diseases  
28 6,344,549 **T** ATR-2 cell cycle checkpoint  
29 6,274,720 **T** Human preproneurotensin/neuromedin N  
30 6,265,556 **T** Nucleic acid encoding CD40 associated proteins  
31 6,168,933 **T** Phospholipid transfer protein  
32 6,124,436 **T** Purified mammalian monocyte antigens and related reagents
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